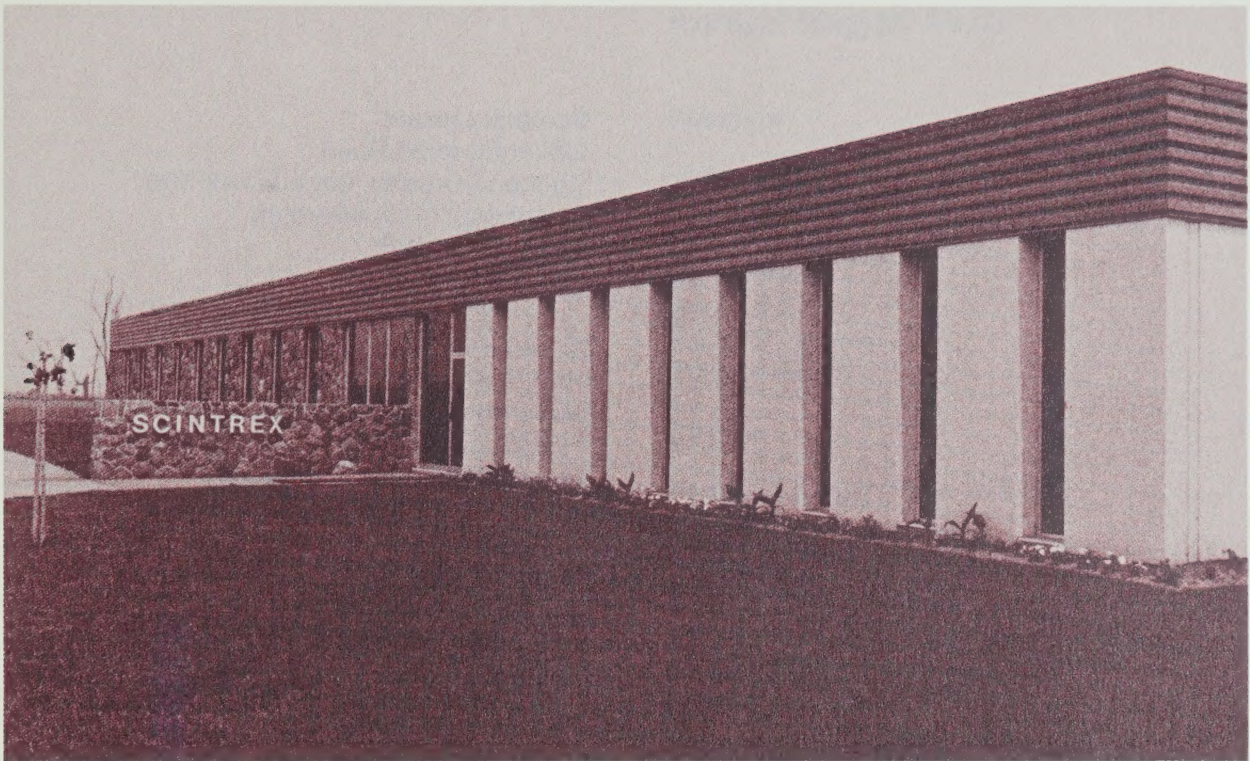


AR49



annual report 1978



Scintrex Concord Plant

Introduction to Scintrex

Scintrex Limited came into being in 1967 through the merger of Sharpe Instruments of Canada Limited, a manufacturer of geophysical instruments founded in 1947 and Seigel Associates Limited, a consulting and contracting company founded in 1956. Scintrex Limited is now the largest company in its field combining research, instrument manufacture, consultation and contracting.

Scintrex equipment, services and know-how have played an integral part in numerous mineral discoveries in many parts of the world. Clients include many of the world's major mineral and petroleum exploration companies, the United Nations, government organizations and public agencies.

Each year, Scintrex instrumentation is shipped to fifty or sixty different countries. Contract exploration services have been provided in more than 40 countries and on all continents. In recent years, exploration programs carried out by Scintrex teams using Scintrex equipment have directly contributed to sixteen major mineral discoveries.

Scintrex regards research and development as the ultimate source of future progress and as such, accords it high priority in terms of facilities, personnel and funds. Its modern research department occupies almost one third of the Concord plant. Scientists and specialists in a variety of fields are engaged in many programs. These range from basic

continued on back inside cover

Scintrex Limited

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Scintrex, Inc.

1973 West North Temple
Salt Lake City, Utah 84116
Telephone: (801) 532-2447
Telex: 00388361

Annual Report 1978

Directors

Harold O. Seigel
Alfred J. Shaul
William L. Seigel
Gerald Stork
Jon G. Baird
Franc. R. Joubin
Harold I. Schiff

Officers

Harold O. Seigel, Ph.D., P.Eng.,
President
Gerald Stork, C.A., P.Eng.,
Vice President, Finance and Administration
Jon G. Baird, B.Sc., P.Eng.,
*Vice President and General Manager,
Earth Science Division*
Alfred J. Shaul, Q.C.,
Secretary
Valentine Burda, M.Sc.,
Vice President
Anthony W. Howland-Rose,
Vice President

Solicitor

Alfred J. Shaul, Q.C.

Bankers

Bank of Nova Scotia

Auditors

Laventhol & Horwath

Transfer Agent and Registrar

Guaranty Trust Company of Canada



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Report to the Shareholders



Your directors are pleased to report that, in the fiscal year ended January 31, 1978, Scintrex has moved firmly ahead on the path of increased sales and profits.

While all sectors of operations showed continuing improvements, the company's strongest growth was in sales of earth science instruments. This involved an increase in production staff and the installation of new equipment.

Financial

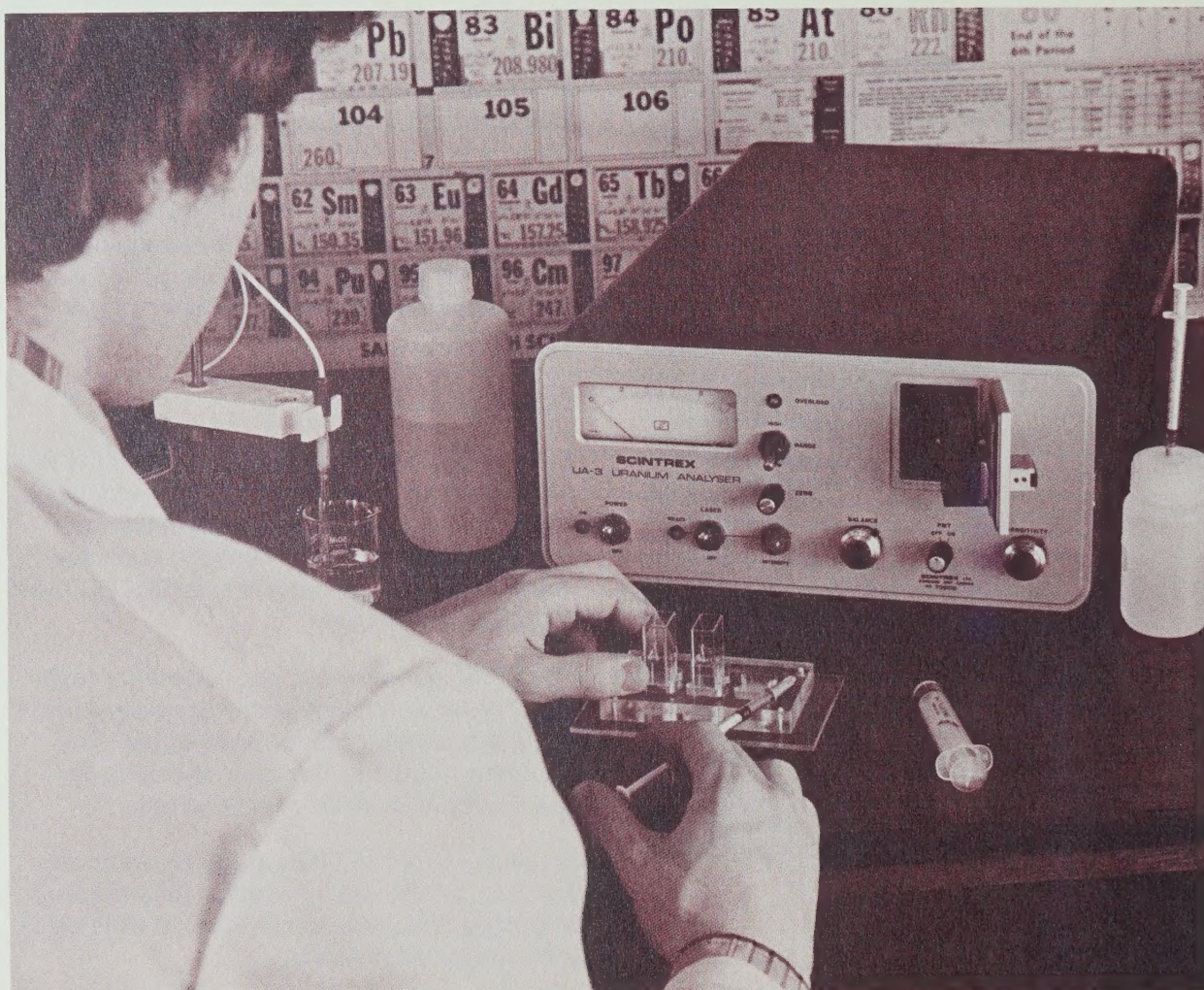
Sales of \$5,850,000 were up 18% from the year before and income before extraordinary items was \$191,000, compared to \$62,000 for the previous year. After utilization of tax-losses carried forward, net income was \$357,000 and \$202,000 respectively.

The profit improvement was achieved despite an increase in net research and development expenditure (after grants) to \$580,000. The company continued its policy of writing off R & D expenses as they are incurred.

A small loss of \$19,000 was absorbed during the year, on the sale of residual land holdings in Buffalo. This represents the final wind-up of a discontinued operation.

During the year, Scintrex sold its share interest in Seigel Asociados S.A. de C.V. of Mexico City to the company's Mexican partner, who continues as its sales agent.

Substantial funds (\$560,000) were devoted to additions to the stock of geophysical equipment for rental and services, as well as to improvements to plant and production facilities. Despite this and the retirement of \$72,000 of long-term debt, the company's working capital position reached a record high of \$1,271,000, an increase of \$246,000 over last year's figure.



UA-3 uranium analyser

Earth Science Division

Sales of exploration instruments during the fiscal year rose by 32%, with emphasis on devices for the expanding world-wide search for uranium. Exports continued at the level of 75% of total sales. Deliveries have been made to the U.S. Department of Energy, the International Atomic Energy Agency and numerous other governmental and major private sector groups.

Scintrex now offers the broadest and most up-to-date range of uranium exploration instruments in the industry. The GAD-6 is the acknowledged leader in portable, four-channel gamma-ray spectrometers. The UA-3 uranium analyser, based on a laser-induced phosphorescence phenomenon has established itself as a unique, portable, high sensitivity detector of uranium in a variety of media.

Geophysical services remained at the level of the previous year. The HEM-801 helicopter electromagnetic system was active in Canada during the year. Magnetic and radiometric surveys using helicopter and fixed-wing aircraft were carried out in Canada and Australia. Exploration in Australia was more buoyant, largely as a result of the policies of its present government.

Using a specially modified HGP-2 high sensitivity mercury spectrometer, Scintrex executed a program of mapping atmospheric mercury vapour levels in Southern Ontario, on behalf of the Canadian Department of the Environment. Information obtained from this type of survey may ultimately assist in the determination of the source of abnormally high levels of mercury in certain areas.

Research and Development

Net R & D expenditure after government grants rose 33% to \$580,000 which constituted approximately 10% of sales. This is considered to be a reasonable level for a high technology company like Scintrex.

Research and development during the year was concentrated in three technical areas. These included analytical instruments, electromagnetic systems and gamma radioactivity measuring devices.

In analytical instruments, further investigations were carried out on laser-induced phosphorescence measurements for uranium. There is now a growing feeling that this type of measurement may, ultimately, become the preferred quantitative method for high sensitivity uranium trace analysis. Patents have been applied for in this field to protect our proprietary position.

A three element (simultaneous) Zeeman-modulated atomic absorption spectrometer was developed during this period under contract to the Geological Survey of Canada. This device, utilizing a basic Scintrex patent, provides quick and accurate geochemical analysis in remote areas. Scintrex intends to produce a range of such dedicated geochemical analytical instruments for the exploration industry.

During the year, much attention was devoted to airborne electromagnetic systems, both for fixed-wing and helicopter use. A Tridem system was designed, constructed and installed in a PBY-Canso long-range survey aircraft, under a joint venture agreement with Kenting Earth Sciences. Testing of this system and its related hardware has now been successfully completed.

Development work on our HEM-802, dual frequency, in-phase/out-of-phase helicopter electromagnetic system, was largely completed during the year, and it became operational shortly thereafter. This system operates simultaneously on 735 Hz and 3220 Hz frequencies.



Assembly of CG-2 gravity meter

Further work on the SE-77 Turam-type ground electromagnetic system resulted in an improved receiver section using ferrite-cored coils. Greater sensitivity and a significant weight reduction were achieved. The new receiver has been designated the SE-77F.

In the radiometric field, a new, broadband scintillation detector, the BGS-2, was engineered. It incorporates a large liquid crystal digital display and an improved audio alarm system in a waterproof package.

A number of new, large volume sodium iodide sensors and interfaces, primarily for airborne surveys, have been developed. These include the GSA-44 (1024 cu. inches), GSA-42 (512 cu. inches) and the GSA-112 (529 cu. inches in a single crystal). The latter was developed as a result of a contract between the U.S. Department of Energy and the company's Salt Lake subsidiary, Scintrex Inc., as part of a comprehensive, vehicle-mounted monitoring system.

Contract Instrumentation

Sales of instrumentation for nuclear power reactors were up 36%. During the year Scintrex delivered a variety of safety monitoring devices to users of CANDU-type reactors in Canada, Argentina and South Korea. These included thermoluminescent dosimeter plaques, an auto urinalizer, a portable tritium monitor, reactivity control logic cabinets and panels for shut-down systems.

Present Operations

At the end of April, 1978, Scintrex' order backlog of sales of goods and services exceeded \$4,500,000. Most of this backlog is scheduled for delivery in the current fiscal year.



SE-77F in field use

The Tridem-Canso airborne electromagnetic system is already heavily booked and is therefore expected to provide a healthy contribution both in the form of use royalties and direct survey revenue this year. A production survey, recently completed, entailed the exploration of a large area for potential lignite deposits, on behalf of the Ontario Department of Natural Resources.

The HEM-802 has proven itself on its first major survey, in Alaska, and already has a number of contracts ahead of it for this field season.

Since the production of scientific instrumentation from the Concord plant has more than doubled in the last three years and both current backlog and anticipation of continuing growth require further expansion, your directors have agreed to a substantial addition to the existing plant. The new production facilities should be available before the end of 1978.

The directors of Scintrex look forward with confidence to the year ahead which should bring a continuation of the company's growth in sales and profits.

I wish to take this opportunity to express our thanks and appreciation to employees at all levels of responsibility for their continuing contribution to the company's progress.

On behalf of the board of directors,



Harold O. Seigel, Ph.D., P.Eng.,
President.



*Kenting PBY-CANSO with
Scintrex' TRIDEM system*

Consolidated Balance Sheet — January 31

	<u>1978</u>	<u>1977</u>
Assets		
Current:		
Cash	\$ 68,609	\$ 50,349
Accounts receivable	1,339,141	833,699
Inventories (Note 2)	1,727,000	1,074,278
Prepaid expenses and sundry assets	40,222	52,124
	<u>3,174,972</u>	<u>2,010,450</u>
Property, plant and equipment (Note 3)	1,124,991	1,073,637
Other (Note 4)	257,318	301,080
	<u><u>\$4,557,281</u></u>	<u><u>\$3,385,167</u></u>
 Liabilities		
Current:		
Bank indebtedness (Note 5)	\$ 818,283	\$ 131,633
Customer deposits	122,133	105,840
Accounts payable and accrued liabilities	934,760	719,800
Income taxes payable	23,909	17,451
Current portion of long-term debt	4,582	10,328
	<u>1,903,667</u>	<u>985,052</u>
Long-term debt (Note 6)	<u>461,557</u>	<u>533,601</u>
 Shareholders' Equity		
Capital Stock (Note 7)	1,689,204	1,689,204
Retained earnings	541,995	214,247
	<u>2,231,199</u>	<u>1,903,451</u>
Less common stock in treasury, at cost (Note 7)	39,142	36,937
	<u>2,192,057</u>	<u>1,866,514</u>
	<u><u>\$4,557,281</u></u>	<u><u>\$3,385,167</u></u>
 On behalf of the Board:		
HAROLD O. SEIGEL, Director		
ALFRED J. SHAUL, Director		

See accompanying notes.

Consolidated Statement of Income — Year Ended January 31

	1978	1977
Sales	<u>\$5,849,762</u>	<u>\$ 4,938,408</u>
Cost of sales including selling, general and administrative expenses	4,470,160	3,926,270
Research and development expenses	694,836	518,394
Depreciation and amortization	327,606	308,092
Interest on long-term debt	49,579	54,247
Other interest	52,353	72,222
Loss (gain) on disposal of property and equipment	19,023	(73,502)
	<u>5,613,557</u>	<u>4,805,723</u>
Less research and development grants	114,474	86,378
	<u>5,499,083</u>	<u>4,719,345</u>
Income before income taxes	350,679	219,063
Income taxes	159,700	157,000
Income (loss) before extraordinary items	190,979	62,063
Extraordinary items (Note 10)	166,244	140,000
Net income	<u>\$ 357,223</u>	<u>\$ 202,063</u>
Weighted average common shares outstanding	858,156	857,765
Income per common share (after preference share dividend requirements of \$19,650):		
Income before extraordinary item	\$0.20	\$0.05
Net income	\$0.39	\$0.20

See accompanying notes.

Consolidated Statement of Retained Earnings — Year Ended January 31

	1978	1977
Retained earnings, beginning of year	\$ 214,247	\$ 51,484
Income for the year	<u>357,223</u>	<u>202,063</u>
	571,470	253,547
Dividends paid on preference shares	<u>29,475</u>	<u>39,300</u>
Retained earnings, end of year	<u>\$ 541,995</u>	<u>\$ 214,247</u>

Consolidated Statement of Changes in Financial Position — Year Ended January 31

	1978	1977
Funds provided:		
Income before extraordinary items	\$ 190,979	\$ 62,063
Depreciation and amortization	327,606	308,092
Loss (gain) on sale of property and equipment	<u>19,023</u>	<u>(73,502)</u>
Working capital provided from operations	537,608	296,653
Income tax reduction arising from utilization of prior years' losses	152,000	140,000
Proceeds from sale of property, equipment and other assets	219,654	161,196
Proceeds from disposition of treasury stock	<u>—</u>	<u>5,018</u>
	909,262	602,867
Funds used:		
Additions to equipment and other assets	559,631	278,852
Retirement of long-term debt	72,044	8,476
Purchase of treasury stock	2,205	—
Dividends paid on preference shares	<u>29,475</u>	<u>39,300</u>
	663,355	326,628
Increase in working capital	245,907	276,239
Working capital, beginning of year	1,025,398	749,159
Working capital, end of year	<u>\$1,271,305</u>	<u>\$ 1,025,398</u>

See accompanying notes.

Notes to Consolidated Financial Statements — January 31, 1978

1. Summary of significant accounting policies:

Principles of consolidation:

These statements include the accounts of the company and its subsidiary companies, all of which are wholly-owned.

Foreign exchange:

Amounts in foreign currencies have been translated substantially at rates existing at year end except for properties and equipment which are at rates prevailing on dates of acquisition.

Inventories:

Inventories are valued at the lower of cost and net realizable value.

Property, plant and equipment:

These assets are carried at cost. Depreciation is provided on the straight-line basis at the rates shown in Note 3.

Other assets:

Commencing with the 1975 fiscal year, the excess of cost of a subsidiary over book value on acquisition is being amortized on the straight-line method over 10 years. Patents and processes are being amortized on the straight-line method over 20 years.

2. Inventories:

	<u>1978</u>	<u>1977</u>
Raw materials	\$ 427,017	\$ 250,910
Work in process	1,073,837	640,102
Finished goods	226,146	183,266
	<u>\$1,727,000</u>	<u>\$ 1,074,278</u>

3. Property, plant and equipment:

	<u>Rates of depreciation</u>	<u>1978</u>	<u>1977</u>
Buildings	5%	\$ 505,396	\$ 557,052
Equipment	10% to 33⅓%	2,046,336	1,671,977
		2,551,732	2,229,029
Less accumulated depreciation		<u>1,516,670</u>	<u>1,313,225</u>
		1,035,062	915,804
Land		89,929	157,833
		<u>\$1,124,991</u>	<u>\$ 1,073,637</u>
Depreciation expense for year		<u>\$ 281,886</u>	<u>\$ 262,372</u>

4. Other assets:

	1978	1977
Patents and processes, at cost less amortization	\$ 54,997	\$ 65,997
Excess of cost of subsidiary over book value on acquisition less amortization	202,321	235,083
	<u>\$ 257,318</u>	<u>\$ 301,080</u>
Amortization for the year amounted to	<u>\$ 45,720</u>	<u>\$ 45,720</u>

5. Bank indebtedness:

The bank indebtedness is secured by a floating charge on all the assets of the company.

6. Long-term debt:

	1978	1977
<i>Scintrex Limited:</i>		
11¼% first mortgage payable, maturing September 1, 1980	\$ 466,139	\$ 470,227
<i>Scintrex Inc:</i>		
7¾% mortgage payable (discharged March 31, 1977)	—	73,702
	466,139	543,929
Less amounts due within one year	4,582	10,328
	<u>\$ 461,557</u>	<u>\$ 533,601</u>

The aggregate amount of principal payments required in each of the next three fiscal years is estimated as follows:

1979	\$ 4,582
1980	5,186
1981	456,371

7. Capital stock:

Authorized:

350,000 6% Cumulative, non-voting, convertible, preference shares, par value \$1 each

3,000,000 Common shares, no par value

	Preference		Common		Total Consideration
	No. of shares	Par value	No. of shares	Consideration	
<i>Issued:</i>					
Outstanding at beginning and end of year	<u>327,500</u>	<u>\$327,500</u>	<u>885,015</u>	<u>\$1,361,704</u>	<u>\$1,689,204</u>
Common stock in treasury, at cost:					
January 31, 1978			<u>28,109</u>	<u>\$ 39,142</u>	
January 31, 1977			<u>25,609</u>	<u>\$ 36,937</u>	

Preference shares:

The preference shares may be converted at any time by the holder or holders thereof into fully-paid common shares (as presently constituted) of the company on the basis of one common for two preference shares. Dividends on these 6% cumulative preference shares are payable semi-annually on the last days of July and January of each year. These shares are non-voting unless the company has failed to pay dividends for a period of two years. During the year the company paid \$29,475 being one and one-half years' arrears of dividends. As of January 31, 1978 the last two semi-annual dividends aggregating \$19,650 are in arrears.

Employee stock option plan:

37,000 common shares remain under the company's revised 1971 Incentive Stock Option Plan. These options may be exercised during the three year period terminating December 31, 1980 at a price of \$0.80 per share.

8. Income taxes:

Income taxes payable for the year are in respect of profits earned by the company and certain subsidiaries.

Certain other subsidiaries have losses in current and prior years amounting to \$170,000 which may be used to reduce taxable income in future years as follows:

\$105,000 to 1980
\$ 65,000 to 1981

9. Remuneration of directors and senior officers:

Total remuneration paid to directors and senior officers amounts to \$202,872 for the year (\$181,904 in 1977).

10. Extraordinary items:

	<u>1978</u>	<u>1977</u>
Reduction of income taxes on application of losses of prior years	\$152,000	\$140,000
Gain on disposal of shares in Seigel Asociados S.A. de C.V. — Mexico	<u>14,244</u>	<u>—</u>
	<u>\$166,244</u>	<u>\$140,000</u>

11. Earnings per share:

Earnings per share are calculated using the weighted average common shares outstanding — 858,156 (1977 — 857,765).

	<u>1978</u>	<u>1977</u>
Income before extraordinary items	20 cents	5 cents
Net income	39 cents	21 cents

Fully diluted earnings per share which would result if all the 6% preference shares were converted into fully paid common shares would be:

	<u>1978</u>	<u>1977</u>
Income before extraordinary items	19 cents	5 cents
Net income	35 cents	20 cents

Auditors' Report

To the Shareholders of Scintrex Limited

We have examined the consolidated balance sheet of Scintrex Limited as at January 31, 1978 and the consolidated statements of income, retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the company as at January 31, 1978 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Toronto, Ontario,
April 12, 1978.

Laventhol & Horwath,
Chartered Accountants.

Introduction to Scintrex
continued from front page

research in pure physics and chemistry evolving new approaches to exploration methods to the study of electronic developments and the utilization of new concepts and components in improving geophysical and geochemical instrumentation.

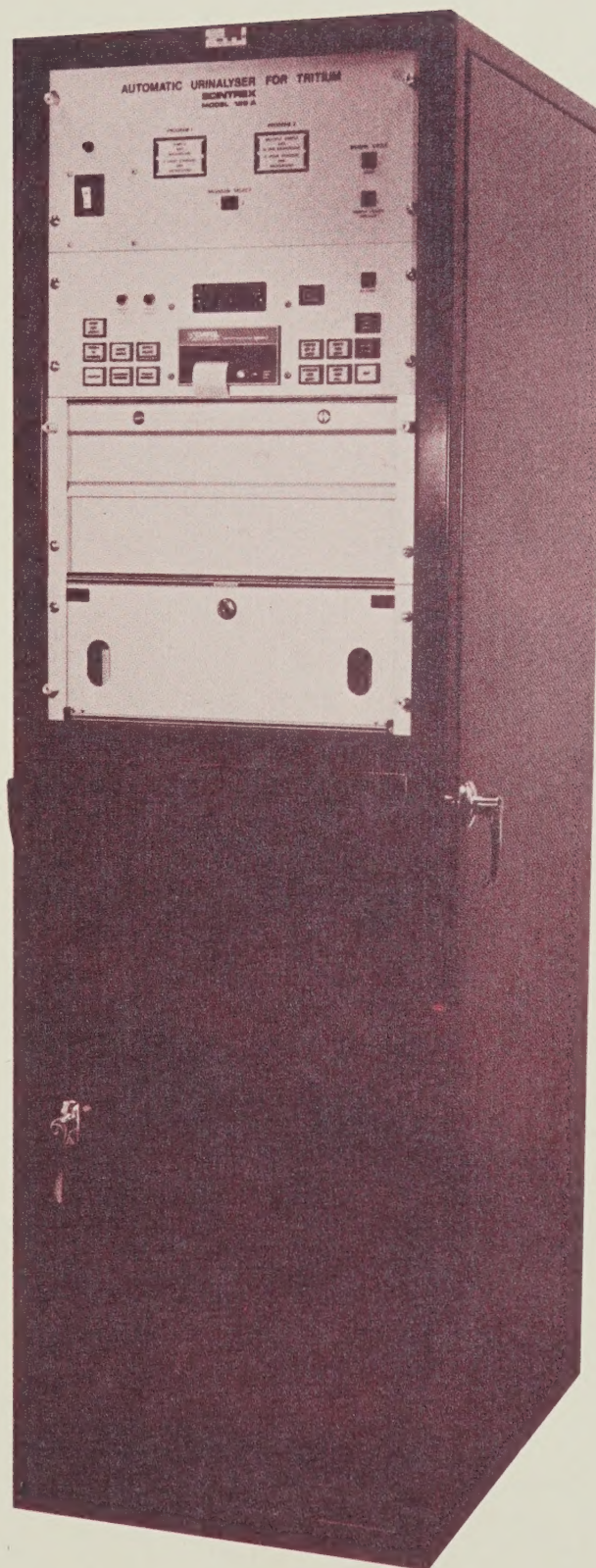
Instruments used in mineral exploration have to meet extraordinary high standards of reliability, performance and ruggedness. These measurements are unusual in that they are mainly carried out close to the sensitivity limits of the instruments, and yet high accuracy and repeatability are required.

Conditions under which field work is usually performed may, however, expose the equipment to wide temperature fluctuations, high humidity, dust, severe shocks and vibrations. Instruments have to be specially designed and constructed to comply with these demands.

Scintrex offers a comprehensive array of services for mineral and groundwater prospecting. In general, these services are carried out using the airborne and ground instrumentation manufactured by the company. Scintrex has a large professional staff with years of world-wide experience in planning, executing and interpreting the results of scientific exploration surveys.

Each year, Scintrex trains specialists from many countries in electronic instrument maintenance as well as in ground and airborne exploration techniques. Some of these programs take place at Scintrex' plant in Canada, while others are carried out in the country where the instruments are to be used.

Scintrex' capability in the design and manufacture of nuclear instrumentation has led the company into the field of monitoring instruments for nuclear power reactors, particularly of the "CANDU"-type.



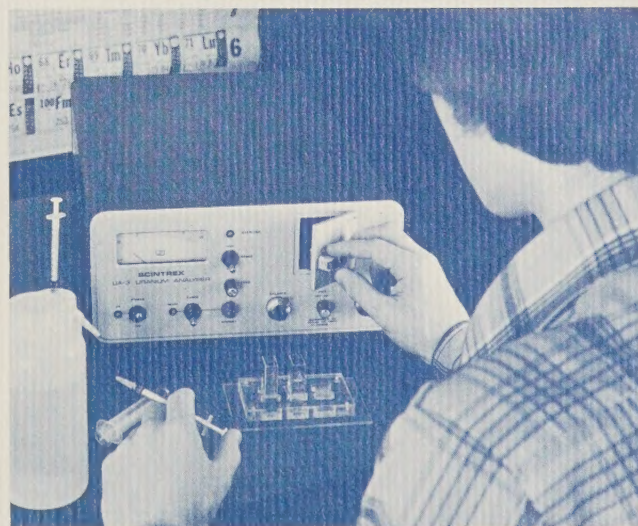
Automatic urinalyser for tritium

SCINTREX limited

SCINTREX Limited
**Consolidated Statement of Changes
in Financial Position**
Six Months ended July 31
(unaudited)

	1978	1977
Funds provided:		
Income before extraordinary item	\$ 309,833	\$ 70,978
Depreciation and amortization	189,887	154,193
Loss on sale of property and equipment	—	2,202
Working capital provided from operations	499,720	227,373
Income tax reduction arising from utilization of prior years' losses	73,000	55,000
Proceeds from sale of property, equipment and other assets	14,592	196,542
	<u>587,312</u>	<u>478,915</u>
Funds used:		
Additions to equipment and other assets	241,741	232,133
Retirement of long-term debt	2,544	69,447
Dividends paid on preference shares	19,650	—
	<u>263,935</u>	<u>301,580</u>
Increase in working capital	323,377	177,335
Working capital, beginning of period	1,271,305	1,025,398
Working capital, end of period	<u>\$1,594,682</u>	<u>\$1,202,733</u>

SCINTREX
interim report



for the six months
ended July 31, 1978

Report to Shareholders

Scintrex' operating results for the first six months ended July 31, 1978 set new historical records for the company.

Sales for the period were \$4,159,000, 65% ahead of those for the first six months of the previous year. Net income, after taxes but before an extraordinary item, was \$310,000 compared to \$71,000 a year earlier. After utilization of tax losses, net income was \$383,000 and \$126,000 respectively.

Scintrex' working capital on July 31, 1978 stood at an all-time high of \$1,595,000, reflecting an increase of \$323,000 achieved during the six months' period.

The continued improvement in the company's performance is due mainly to the sustained growth in demand for Scintrex' mineral exploration equipment. Survey activity, particularly during the second quarter, showed a substantial increase over the same period last year. Accelerated shipments of nuclear power plant instrumentation also contributed to higher earnings during the period.

Notwithstanding increased production, Scintrex' current order backlog remains at a level in excess of \$4.5 million, reflecting the results of the company's intensified sales effort.

The previously reported plant expansion is expected to be completed by the end of the current fiscal year. This will add approximately 50% to the company's present floor space at the Concord plant.

In view of the progress achieved to date and the continuing high level of order backlog, Scintrex' management expects to show satisfactory results for the remainder of the fiscal year.

Harold O. Seigel, Ph.D., P.Eng.
President

September 11, 1978

SCINTREX Limited Consolidated Statement of Income Six Months ended July 31 (unaudited)

	1978	1977
Sales	\$4,159,313	\$2,527,855
Cost of sales including selling and administrative expenses	3,072,095	1,875,142
Research and development expenses	399,386	378,876
Depreciation and amortization	189,887	154,193
Interest on long-term debt	26,686	22,426
Other interest	39,842	15,133
Loss on disposal of property and equipment	—	2,202
	3,727,896	2,447,972
Less research and development grants	72,416	56,095
	3,655,480	2,391,877
Income before income taxes	503,833	135,978
Income taxes	194,000	65,000
Income before extraordinary item	309,833	70,978
Extraordinary item:		
Income tax reduction arising from utilization of prior years' losses	73,000	55,000
Net income	\$ 382,833	\$ 125,978
Number of common shares outstanding	873,241	859,406

Income per common share (after preference share dividend requirements of \$9,825):

Income before extraordinary item	\$ 0.34	\$ 0.07
Net income	\$ 0.43	\$ 0.14